
UTAH DEPARTMENT OF TRANSPORTATION

TECHNICAL BULLETIN MT-05.10

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MATERIALS MOI PART 8 SECTION 1012 INDEPENDENT ASSURANCE OF QUALIFIED TECHNICIANS

An Independent Assurance Program, as required by *Code of Federal Regulation Title 23 Part 637*, is an independent verification of equipment, sampling, and testing procedures, which involves an effort separate and distinct from normal materials acceptance testing activities.

The IA program, as outlined in *Materials Manual of Instruction Part 8 Section 1012*, is system-based, rather than project-based, and managed by central QA and Region Materials personnel. Each Region has an Independent Assurance Inspector (IAI), charged with tracking and conducting Independent Assurance activities in that region.



In a project-based program, Independent Assurance is focused on, and directly related to, the materials testing activities of each specific construction project. However, in a system-based program, all technicians are simply evaluated a minimum of twice per year in performance of the acceptance test procedures in each area of their individual qualifications. Additional Independent Assurance analysis may also be performed at any time upon request by, or for, a technician or laboratory. Independent Assurance does not have to be performed on every test encompassed by a given qualification.

For technicians, a system based IA program means all sampling and testing personnel employed on UDOT projects are required to meet the Independent Assurance requirements. **Failure to participate in the Independent Assurance program will result in forfeiture of the technicians TTQP qualification in the associated qualification area.**

A TECHNICIAN HOLDING QUALIFICATION IN EACH OF THESE FIELDS SHOULD BE EVALUATED TWICE PER YEAR IN THE FOLLOWING TEST PROCEDURES:

Embankment and Base and In-Place Density Testing Technician Qualification

AASHTO T 99/T 180 Moisture-Density Relations of Soils

AASHTO T 310 In-Place Density and Moisture Content of Soils and Soil Aggregates by Nuclear Methods

Aggregate Testing Technician Qualification

AASHTO T 27 Sieve Analysis of Fine and Coarse Aggregate; in conjunction with

AASHTO T 11 Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing

Asphalt Testing Technician Qualification

AASHTO T 30 Mechanical Analysis of Extracted Aggregates

AASHTO T 308 Determining the Asphalt Binder Content of Hot Mix Asphalt by the Ignition Method

AASHTO T 166 Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated-Surface Dry Specimens

AASHTO T 209 Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

AASHTO T 312 Preparing and Determining the Density of HMA Specimens by Means of the Gyratory Compactor

Concrete Testing Technician Qualification

AASHTO T 119 Slump of Hydraulic Cement Concrete

AASHTO T 152 Air Content of Freshly Mixed Concrete by the Pressure Method

AASHTO T 23 Making and Curing Concrete Tests Specimens in the Field

Sampling, Reduction & Density

AASHTO T 310 In-Place Density and Moisture Content of Soils and Soil Aggregates by Nuclear Methods

VERIFICATION OPTIONS

Options for performing Independent Assurance sampling and testing are:

- Split samples (can be multiple splits, as long as there are at least two technicians and two pieces of equipment)
- Limited observation
- Proficiency samples

Limited observations may be utilized only once annually per technician, per test procedure, and should be limited to about 10% of the overall program.

TTQP QUALIFICATION AND THE IA PROGRAM

It is the responsibility of the qualified technician to be part of the Independent Assurance program. Failure by any TTQP qualified technician, working on any UDOT project, to participate in the Independent Assurance program will result in forfeiture of the technician's TTQP qualification in the associated qualification area. Reinstatement will require re-qualification.

When a technician has not satisfied either of the minimum required evaluations at the end of the evaluation period (calendar year) the respective qualification is forfeited. If the technician has satisfied one evaluation at the end of the evaluation period, an extra three months is allowed to satisfy the requirements. This evaluation may not be used in the next evaluation period. At the end of the three-month extension, if the IA requirements are not satisfied the technician forfeits the qualification. After a qualification is forfeited, the technician must re-qualify in accordance with *Materials Manual of Instruction Part 2 Section 1014, Transportation Technician Qualification Program*, available at <http://www2.udot.utah.gov/index.php/m=c/tid=644>.

If, through IA activities, a TTQP qualified technician is identified as unable or unwilling to perform sampling and testing according to procedures, the IA representative will forward documentation to the UDOT Qualification Committee for review under the TTQP Revocation, Suspension or Denial policy as listed in MOI Section 1014.

FHWA REPORT

The Region and Central Laboratories will submit an annual report to the Quality Assurance Section summarizing the results of the IA efforts in the Region and Central Laboratory. The Quality Assurance Engineer will submit an annual report to FHWA summarizing the results of the systems based IA program.

WEBSITES:

UDOT TTQP: <http://www2.udot.utah.gov/index.php/m=c/tid=412>

UDOT Materials Quality Assurance Manual (MOI Part 8 Section 1012):
<http://www2.udot.utah.gov/index.php/m=c/tid=644>

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